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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RESAN, STEVAN A

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/692,569

Applicant(s)

WATANABE ET AL.

Examiner

Stevan A. Resan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunuma et al US 5409738 in view of Wright US 5891530.

Matsunuma et al disclose a method of making a magnetic disk comprising the steps of coating a disk surface with a lubricating layer comprising molecules having a photocrosslinking functional group and causing crosslinking by applying optical radiation. The optical radiation used by Matsunuma may be an "excimer laser" (Col 4 lines 28-33).

It was old in the art, as the newly cited references clearly teach, that excimer lasers were lasers having half height width of 15 nm or less as in claim 17, i.e. monochromatic (See Wright Col 4 lines 23-26; Col 7 lines 1-8).

While Matsunuma do not express a preference for a UV excimer laser, Wright teaches that protective coatings may be preferably cured by UV excimer lasers. The 222 nm output taught by Wright corresponds to an absorption wavelength of the alkenyl groups (as in claim 18) which are taught by both Matsunuma et al and Wright.

It would therefore have been obvious to one of ordinary skill in the art to select an excimer UV laser of monochromatic 222 nm in order to create free radicals from alkenyl functional groups to promote crosslinking in the films of Matsunuma et al. and to regulate the reaction rate by controlling temperature as is old in the chemical arts.

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3. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burguette et al US 4705699 in view of Nohr et al US 5747550.

Burguette et al disclose a method of making a magnetic recording medium comprising the steps of coating a medium surface with a lubricating layer comprising molecules having a photocrosslinking functional group and causing crosslinking by applying optical radiation. The optical radiation used by Burguette may be ultraviolet radiation. The coatings of Burguette may contain photopolymerization initiators or sensitizers. (Col 13 lines 33-44) Burguette do not teach that the UV radiation may be substantially monochromatic far ultraviolet radiation with a wavelength corresponding to an absorption wavelength of a photocrosslinking functional group.

However, Nohr et al teach the use of wavelength specific sensitizers associated with a reactive species-generating photoinitiator. (See Col 11 lines 51-61).

It would have been obvious to one of ordinary skill in the art, therefore, to follow the teachings of Nohr to match the irradiated wavelength to an absorption wavelength of a sensitizer and/or monomer of Burguette to more efficiently utilize the radiation source. See Col 11 lines 1-8, Col 11 lines 1-8 for claim 17, See examples for claims 17-18.

4. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons et al US 6045864 in view of Lewis et al US 6204504.

Lyons et al teach a process for coating a surface comprising coating a surface with a lubricating layer comprising molecules having a photocrosslinking functional group (diacrylate) and causing crosslinking in the molecules by applying as a UV source

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(a UV excimer laser of a wavelength of 222 nm) which is deemed to correspond to the wavelength absorbed by the diacrylate group. (See example 1).

Lyons et al do not teach the forming of the coating on a magnetic recording medium.

However Lewis et al disclose a method of making a magnetic disk comprising the steps of coating a disk surface with a lubricating layer comprising molecules having a photocrosslinking functional group and causing crosslinking by applying optical radiation in the Ultraviolet region and infrared radiation to heat the surface.

It would have been obvious to one of ordinary skill in the art to use the process of Lyons to form a coating on a magnetic recording medium since it would eliminate the separate solution coating step of Lewis, therefore speeding the processing.

5. Applicant's arguments with respect to claims 16-19 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Matsumoto et al US 6489081 is cited for teaching radical generators which may be used with preferred monomers: acrylates, methacrylates, and vinyl esters for photopolymerization in the UV region for producing magnetic recording materials.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stevan A. Resan whose telephone number is (703) 308-4287. The examiner can normally be reached on Tues-Fri from 7:30AM to 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718


STEVAN A. RESAN
PRIMARY EXAMINER